IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (PREVIOUSLY PRESENTED) A magnetic circuit, comprising:

a magnet including first, second, third and fourth magnet parts, the first and second magnet parts disposed adjacent to each other and having opposite polarizations, the third and fourth magnet parts respectively neighboring the first and second magnet parts such that at least two sides thereof are enclosed by the first and second magnet parts, and having opposite polarizations to the first and second magnet parts, respectively;

a tracking coil interacting with the first and second magnet parts generating a driving force in a tracking direction; and

a first focusing/tilting coil interacting with the first and third magnet parts and a second focusing/tilting coil interacting with the second and fourth magnet parts, generating a driving force in at least one of a focusing direction and a tilting direction including the focusing direction,

wherein a position of a neutral zone between the first and third magnet parts, a position of a neutral zone between the second and fourth magnet parts, and a magnetic flux intensity distribution having an asymmetric shape along a focusing direction are changeable in order to optimize a tracking sensitivity.

2. (ORIGINAL) The magnetic circuit according to claim 1, wherein the first and second magnet parts are substantially ¬-shaped and symmetric.

3. (ORIGINAL) The magnetic circuit according to claim 2, wherein the first and second magnet parts are substantially ¬-shaped and symmetric so that the magnetic circuit is used when a driving center is required to be positioned upward.

4. (CANCELLED)

5. (CANCELLED)

6. (ORIGINAL) The magnetic circuit according to claim 1, wherein the first and second magnet parts are substantially L-shaped and symmetric.

7. (ORIGINAL) The magnetic circuit according to claim 6, wherein the first and second magnet parts are substantially L-shaped and symmetric so that the magnetic circuit is used when a driving center is required to be positioned downward.

8. (ORIGINAL) The magnetic circuit of claim 6, wherein a position of a neutral zone between the first and third magnet parts and a position of a neutral zone between the second and fourth magnet parts along the focusing direction are changeable.

9. (ORIGINAL) The magnetic circuit of claim 8, wherein the position of the neutral zone between the first and third magnet parts and the position of the neutral zone between the second and fourth magnet parts along the focusing direction are changeable in order to optimize a tracking sensitivity.

10. (ORIGINAL) The magnetic circuit of claim 1, wherein a position of a neutral zone between the first and third magnet parts and a position of a neutral zone between the second and fourth magnet parts along the focusing direction are changeable.

11. (ORIGINAL) The magnetic circuit of claim 1, wherein the position of a neutral zone between the first and third magnet parts and the position of a neutral zone between the second and fourth magnet parts along the focusing direction are changeable in order to optimize a tracking sensitivity.

12. (ORIGINAL) The magnetic circuit of claim 10, wherein the magnet includes a 4-polarization surface-polarized magnet or a pair of 2-polarization surface-polarized magnets.

13. (ORIGINAL) The magnetic circuit according to claim 1, wherein the magnet includes a 4-polarization surface-polarized magnet or a pair of 2-polarization surface-polarized magnets.

14. (ORIGINAL) The magnetic circuit according to claim 1, wherein the magnetic circuit is selectively used for biaxial, triaxial, or quadriaxial movements.

15. (ORIGINAL) The magnetic circuit according to claim 14, wherein the magnetic circuit is selectively used for biaxial, triaxial, or quadriaxial movements by controlling direction of current applied to the first and second focusing/tilting coils.

16. (ORIGINAL) The magnetic circuit according to claim 1, wherein at least one of the first and second focusing/tilting coils and the tracking coil is a fine pattern coil.

17. (PREVIOUSLY PRESENTED) An optical pickup actuator for an objective lens, comprising:

a base;

a bobbin holding the objective lens;

a support fixed at one end to a holder placed on a side of the base and fixed at the other end to a side surface of the bobbin, and movably supporting the bobbin; and

a pair of magnetic circuits, each of the pair positioned on a different side surface of the bobbin and oppose each other,

wherein the magnetic circuit includes:

a magnet including first, second, third and fourth magnet parts, the first and second magnet parts disposed adjacent to each other and having opposite polarizations, the third and fourth magnet parts respectively neighboring the first and second magnet parts such that at least two sides thereof are enclosed by the first and second magnet parts, and having opposite polarizations to the first and second magnet parts, respectively;

a tracking coil interacting with the first and second magnet parts for generating a driving force in a tracking direction; and

a first focusing/tilting coil interacting with the first and third magnet parts and a second focusing/tilting coil interacting with the second and fourth magnet parts, for driving in at least one of a focusing direction and a tilting direction including the focusing direction,

wherein a position of a neutral zone between the first and third magnet parts, a position of a neutral zone between the second and fourth magnet parts, and a magnetic flux intensity distribution having an asymmetric shape along a focusing direction are changeable in order to optimize a tracking sensitivity.

18. (ORIGINAL) The optical pickup actuator according to claim 17, wherein the first and second magnet parts are substantially ¬-shaped and symmetric.

19. (ORIGINAL) The optical pickup actuator according to claim 18, wherein the first and second magnet parts are substantially ¬-shaped and symmetric so that the magnetic circuit is used when a driving center is required to be positioned upward.

20. (CANCELLED)

21. (CANCELLED)

22. (ORIGINAL) The optical pickup actuator according to claim 17, wherein the first and second magnet parts are substantially L-shaped and symmetric.

23. (ORIGINAL) The optical pickup actuator according to claim 22, wherein the first and second magnet parts are substantially L-shaped and symmetric so that the magnetic circuit is used when a driving center is required to be positioned downward.

24. (ORIGINAL) The optical pickup actuator according to claim 22, wherein a position of a neutral zone between the first and third magnet parts and a position of a neutral zone between the second and fourth magnet parts along the focusing direction are changeable.

25. (ORIGINAL) The optical pickup actuator according to claim 24, wherein a position of a neutral zone between the first and third magnet parts and a position of a neutral zone between the second and fourth magnet parts along the focusing direction are changeable in order to optimize a tracking sensitivity.

26. (ORIGINAL) The optical pickup actuator according to claim 17, wherein a position of a neutral zone between the first and third magnet parts and a position of a neutral zone between the second and fourth magnet parts along the focusing direction are changeable.

27. (ORIGINAL) The optical pickup actuator according to claim 26, wherein the position of the neutral zone between the first and third magnet parts and the position of the neutral zone between the second and fourth magnet parts along the focusing direction are changeable in order to optimize a tracking sensitivity.

28. (ORIGINAL) The optical pickup actuator according to claim 26, wherein the magnet includes a 4-polarization surface-polarized magnet or a pair of 2-polarization surface-polarized magnets.

29. (ORIGINAL) The optical pickup actuator according to claim 17, wherein the magnet includes a 4-polarization surface-polarized magnet or a pair of 2-polarization surface-polarized magnets.

30. (ORIGINAL) The optical pickup actuator according to claim 17, wherein the magnetic circuit can be selectively used for biaxial, triaxial, or quadriaxial movements.

31. (ORIGINAL) The optical pickup actuator according to claim 30, wherein the magnetic circuit is selectively used for biaxial, triaxial, or quadriaxial movements by controlling direction of current applied to the first and second focusing/tilting coils.

32. (ORIGINAL) The optical pickup actuator according to claim 17, wherein at least one of the first and second focusing/tilting coils and the tracking coil is a fine pattern coil.

33. (ORIGINAL) The optical pickup actuator according to claim 17, wherein the end of the support fixed to the side surface that is different from the side surfaces on which the magnetic circuits are positioned.

34. (ORIGINAL) The optical pickup actuator according to claim 17, wherein either one of the first and second focusing/tilting coils and the tracking coil or the magnet is positioned on the side surface of the bobbin, and the other one is installed on the base.

35. (PREVIOUSLY PRESENTED) An optical recording and/or reproducing apparatus for a disc, comprising:

an optical pickup, comprising:

an optical pickup actuator driving an objective lens movably installed along a radial direction of the disc to record information on the disc and/or reproduce information recorded on the disc,

a focusing servo and a tracking servo; and

a controlling unit controlling the focusing servo and the tracking servo,

wherein the optical pickup actuator includes:

a base,

a bobbin holding the objective lens,

a support fixed at one end to a holder placed on a side of the base and fixed at the other end to a side surface of the bobbin and movably supporting the bobbin, and

a pair of magnetic circuits, each of the pair positioned on a different side surface of the bobbin and oppose each other,

wherein the magnetic circuit includes:

a magnet including first, second, third and fourth magnet parts, the first and second magnet parts disposed adjacent to each other and having opposite polarizations, the third and fourth magnet parts respectively neighboring the first and second magnet parts such that at least two sides thereof are enclosed by the first and second magnet parts, and having opposite polarizations to the first and second magnet parts, respectively;

a tracking coil which interacting with the first and second magnet parts for generating a driving force in a tracking direction; and

a first focusing/tilting coil interacting with the first and third magnet parts and a second focusing/tilting coil which interacts with the second and fourth magnet parts, for generating a driving force in at least one of a focusing direction and a tilting direction including the focusing direction,

wherein a position of a neutral zone between the first and third magnet parts, a position of a neutral zone between the second and fourth magnet parts, and a magnetic flux intensity distribution having an asymmetric shape along a focusing direction are changeable in order to optimize a tracking sensitivity.

36. (ORIGINAL) The optical recording and/or reproducing apparatus according to claim 35, wherein the first and second magnet parts are substantially ¬-shaped and symmetric.

37. (ORIGINAL) The optical recording and/or reproducing apparatus according to claim 36, wherein the first and second magnet parts are substantially ¬-shaped and symmetric so that the magnetic circuit is used when a driving center is required to be positioned upward.

38. (ORIGINAL) The optical recording and/or reproducing apparatus according to claim 35, wherein the first and second magnet parts are substantially L-shaped and symmetric.

39. (ORIGINAL) The optical recording and/or reproducing apparatus according to claim 38, wherein the first and second magnet parts are substantially L-shaped and symmetric so that the magnetic circuit is used when a driving center is required to be positioned downward.

40. (CANCELLED)

41. (CANCELLED)

42. (ORIGINAL) The optical recording and/or reproducing apparatus according to claim 35, wherein the magnet includes a 4-polarization surface-polarized magnet or a pair of 2-polarization surface-polarized magnets.

43. (ORIGINAL) The optical recording and/or reproducing apparatus according to claim 35, wherein the magnetic circuit can be selectively used for biaxial, triaxial, or quadriaxial movements.

44. (ORIGINAL) The optical recording and/or reproducing apparatus according to claim 43, wherein the magnetic circuit can be selectively used for biaxial, triaxial, or quadriaxial movements by controlling direction of current applied to the first and second focusing/tilting coils of the pair of magnetic circuits.

45. (ORIGINAL) The optical recording and/or reproducing apparatus of claim 35, wherein at least one of the first and second focusing/tilting coils and the tracking coil is a fine pattern coil.

46. (PREVIOUSLY PRESENTED) A magnetic circuit on a base, comprising:

a first magnet and a second magnet having opposite polarizations and adjacent to each other on the base;

a third magnet partially enclosed by the first magnet and having an opposite polarization to the first magnet;

a fourth magnet partially enclosed by the second magnet and having an opposite polarization to the second magnet;

a tracking coil interacting with the first and second magnets;

a first focusing/tilting coil interacting with the first and third magnets; and

a second focusing/tilting coil interacting with the second and fourth magnets,

wherein a position of a neutral zone between the first and third magnets, a position of a neutral zone between the second and fourth magnets, and a magnetic flux intensity distribution having an asymmetric shape along a focusing direction are changeable in order to optimize a tracking sensitivity.

47. (ORIGINAL) The magnetic circuit according to claim 46, wherein the tracking coil generates a driving force in a tracking direction, the first and second focusing/tilting coils generate a driving force in at least one of a focusing direction and a tilting direction including the focusing direction.

48. (ORIGINAL) The magnetic circuit according to claim 47, wherein the first and second magnets are substantially L-shaped and symmetric.

49. (CANCELLED)

50. (CANCELLED)

51. (ORIGINAL) The magnetic circuit according to claim 47, wherein the first, second, third, and fourth magnets are parts of either one of a 4-polarization surface-polarized magnet or a pair of 2-polarization surface-polarized magnets.

52. (ORIGINAL) The magnetic circuit according to claim 47, wherein the magnetic circuit is selectively used for biaxial, triaxial, or quadriaxial movements by controlling the direction of current applied to the first and second focusing/tilting coils.

53. (ORIGINAL) The magnetic circuit according to claim 47, wherein at least one of the first and second focusing/tilting coils and the tracking coil is a fine pattern coil.

54. (PREVIOUSLY PRESENTED) An optical pickup actuator for an objective lens, comprising:

a base;

a bobbin holding the objective lens;

supports each having one end fixed to a holder placed on a side of the base and each

having the other end fixed a side surface of the bobbin, and movably supporting the bobbin; and

a pair of magnetic circuits, each of the pair positioned on a different side surface of the bobbin and oppose each other,

wherein the magnetic circuit includes:

a first magnet and a second magnet having opposite polarizations and adjacent to each other on the base,

a third magnet partially enclosed by the first magnet and having an opposite polarization to the first magnet,

a fourth magnet partially enclosed by the second magnet and having an opposite polarization to the second magnet,

a tracking coil interacting with the first and second magnets,

a first focusing/tilting coil interacting with the first and third magnets, and

a second focusing/tilting coil interacting with the second and fourth magnets,

wherein a position of a neutral zone between the first and third magnets, a position of a neutral zone between the second and fourth magnets, and a magnetic flux intensity distribution having an asymmetric shape along a focusing direction are changeable in order to optimize a tracking sensitivity.

55. (ORIGINAL) The optical pickup actuator according to claim 54, wherein the tracking coil generates a driving force in a tracking direction, and the first and second focusing/tilting coils generate a driving force in at least one of a focusing direction and a tilting direction including the focusing direction.

56. (ORIGINAL) The optical pickup actuator according to claim 54, wherein the first and second magnets are substantially L-shaped and symmetric.

57. (CANCELLED)

58. (CANCELLED)

59. (ORIGINAL) The optical pickup actuator according to claim 54, wherein the first, second, third, and fourth magnets are parts of either one of a 4-polarization surface-polarized magnet or a pair of 2-polarization surface-polarized magnets.

60. (ORIGINAL) The optical pickup actuator according to claim 54, wherein the magnetic circuit is selectively used for biaxial, triaxial, or quadriaxial movements by controlling the direction of current applied to the first and second focusing/tilting coils.

61. (ORIGINAL) The optical pickup actuator according to claim 54, wherein at least one of the first and second focusing/tilting coils and the tracking coil is a fine pattern coil.

62. (ORIGINAL) The optical pickup actuator according to claim 54, wherein the actuator is applied to CD-RM, DVD-ROM, and CD-DVD compatible optical pickups.

63. (ORIGINAL) The optical pickup actuator according to claim 54, wherein the supports are wires or plate springs.

64. (ORIGINAL) The optical pickup actuator according to claim 54, wherein the number of supports is four or six.

65. (ORIGINAL) The optical pickup actuator according to claim 54, wherein the tracking coils and the first and second focusing/tilting coils are substantially rectangular in shape.

66. (PREVIOUSLY PRESENTED) An optical pickup for an optical disc, comprising:

an objective lens focusing light emitted from a light source; and

an optical pickup actuator performing biaxial, triaxial, or quadriaxial movements by controlling the direction of current applied to the first and second focusing/tilting coils,

a pair of magnetic circuits wherein a position of a neutral zone between a first magnet and a third magnet, a position of a neutral zone between a second magnet and a fourth magnet, and a magnetic flux intensity distribution having an asymmetric shape along a focusing direction are changeable in order to optimize a tracking sensitivity.

67. (PREVIOUSLY PRESENTED) The optical pickup according to claim 66, wherein the optical pickup actuator comprises:

a base,

a bobbin holding the objective lens,

supports each having one end fixed to a holder placed on a side of the base and each having the other end fixed a side surface of the bobbin, and movably supporting the bobbin, and

the pair of magnetic circuits, each of the pair positioned on a different side surface of the bobbin and oppose each other,

wherein the magnetic circuit includes:

a first magnet and a second magnet having opposite polarizations and adjacent to each other on the base,

a third magnet partially enclosed by the first magnet and having an opposite polarization to the first magnet,

a fourth magnet partially enclosed by the second magnet and having an opposite polarization to the second magnet,

a tracking coil interacting with the first and second magnets,

a first focusing/tilting coil interacting with the first and third magnets, and

a second focusing/tilting coil interacting with the second and fourth magnets.

68. (ORIGINAL) The optical pickup according to claim 67, wherein the tracking coil generates a driving force in a tracking direction, and the first and second focusing/tilting coils generate a driving force in at least one of a focusing direction and a tilting direction including the focusing direction.

69. (ORIGINAL) The optical pickup according to claim 67, wherein the first and second magnets are substantially L-shaped and symmetric.

70. (CANCELLED)

71. (CANCELLED)

72. (ORIGINAL) The optical pickup according to claim 67, wherein the first, second, third, and fourth magnets are parts of either one of a 4-polarization surface-polarized magnet or a pair of 2-polarization surface-polarized magnets.